

did you get on the average?

Dr. Olivier: Average exit velocity was 1,776 feet per second.

This was for an average of seven. We did 10. We obtained velocity on seven. (5 H 76 et seq.)

All bullets recovered after firing through cadaver wrists were grossly mutilated in front and pristine at the base, four of which are shown in Figure 13. This is a finding uniformly observed by the author. It will be recalled that CE 399 is pristine in the front and mutilated at the base.

These figures of exit velocity are consistent with those I obtained by chronograph in each of three firings through appropriate anatomical specimens of neck and of wrist at Lake City Army Ordnance Plant in Missouri in March, 1968; however, the retardation of 265 feet per second is about three times that obtained by myself in a single firing through a thorax. I believe such a bullet as CE 399 from authentic ammunition, if fired from Mr. Oswald's gun, would penetrate several Presidents' necks and several Governors' wrists. The upholstery covering

the unarmored partition between the driver and passenger compartments of the limousine was not even scratched; yet, according to the theory set forth by Mr. Arlen Specter and adopted by the Warren Commission, CE 399 became entangled in the Governor's clothing, only to subsequently fall out unobserved on a litter at Parkland Hospital.

Thigh Wound

This author's interest was aroused quite early by the operative report (Figure 14) of Dr. Shires and his three assistants: Drs. Robert N. McClelland, Charles R. Baxter and Ralph D. Patman.

Their report clearly states that a bullet fragment was "embedded" in the Governor's left femur; however, examination of X-ray films published in the Warren Commission Report (CE 695, 696) and on deposit in the National Archives fails to reveal injury to the bone or a foreign body near the bone, as I interpret them. The purpose of their operation was for debridement and removal of the fragment. A metal fragment was not recovered. Dr. Shires subsequently confirmed on several occasions that the fragment remains embedded in the Governor's femur—it did not become an exhibit of the Warren Commission.

Dr. Shires, in his sworn deposition (rules of evidence were observed in testimony taken by the Warren Commission for subsequent possible use in court) taken in Dallas on March 23, 1964, where he had access to the X-ray films, the Governor's clinical chart and his colleagues, testified:

Mr. Specter: And what did you observe as to the wound on the thigh?

Dr. Shires: The wound on the thigh was a peculiar one. There was a 1-cm. punctate missile wound over the junction of the middle and lower third of the leg and the medial aspect of the thigh. The peculiarity came in that the X-rays of the left leg showed only a very small 1-mm. bullet fragment embedded in the femur of the left leg. Upon exploration of this wound, the other peculiarity

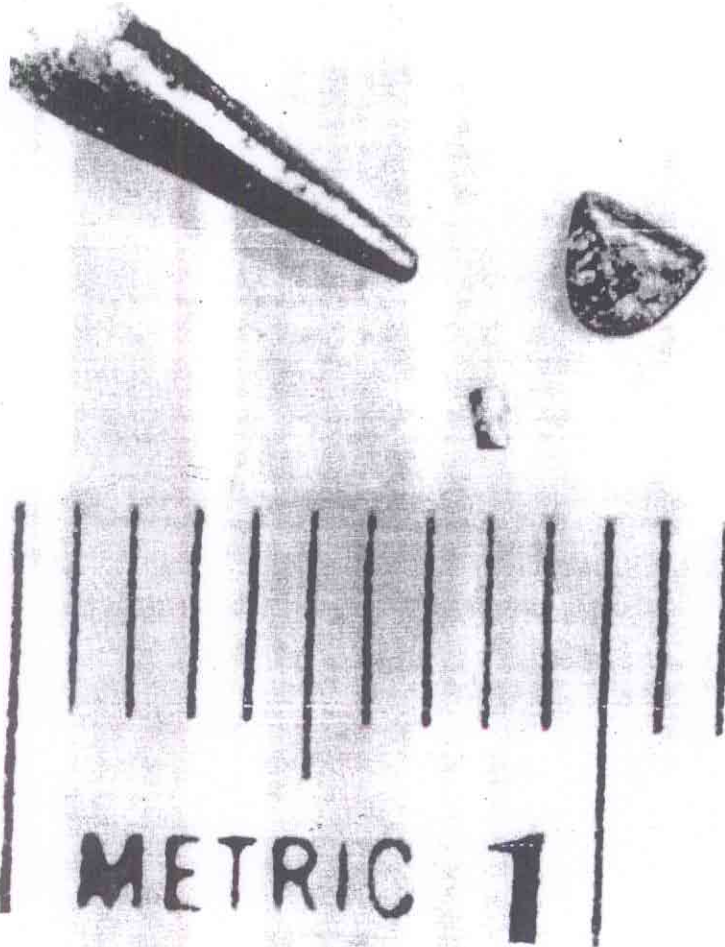


FIGURE 8: © Josiah Thompson, 1967, [with permission.] Photograph of CE 842 from Prof. Thompson's book, *Six Seconds in Dallas*. It can clearly be seen that the exhibit at that time consisted of two fragments. This photograph had to have been taken by the National Archivist, believe.

was that there was very little soft tissue damage, less than one would expect from an entrance wound of a centimeter in diameter, which was seen on the skin. So it appeared, therefore, that the skin wound was either a tangential wound or that a larger fragment had penetrated or stopped in the skin and subsequently fallen out of the entrance wound.

Mr. Specter: What size fragment was there in the Governor's leg at that time?

Dr. Shires: We recovered none. The small one that was seen on X-ray—and it was still in the femur and being that small, with no tissue damage after debridement—it was thought inadvisable to remove this small fragment.

Mr. Specter: Is that fragment in the bone itself at the present time?

Dr. Shires: Yes.

Mr. Specter: Would you have any estimate as to the size of that fragment?

Dr. Shires: One millimeter in diameter—one to two. (Dr. Shires uses the term "diameter," implying that the fragment is spherical. The formula for a sphere is $\frac{4}{3}\pi r^3$ and lead has a density of 11.4; therefore a 1 mm. sphere weighs 6 milligrams or 1/10 of a grain and a 2 mm. sphere weighs 48 milligrams or $\frac{3}{4}$ of a grain.

Mr. Specter: Would you have any estimate as to how much that might weigh in grains?

Dr. Shires: In grains—a fraction of a grain, maybe, a tenth of a grain—very small.

Mr. Specter: A tenth of a grain.

Dr. Shires: Yes. (6 H 106.)

Prof. Thompson, on page 149 of his book, *Six Seconds in Dallas*, writes: "In a conversation on May 31, 1967, he (Dr. Shires) confirmed to the author (Thompson) that a fragment was indeed embedded in the bone."

Dr. John Lattimer¹⁵ reports that Dr. Shires, on May 6, 1974, again

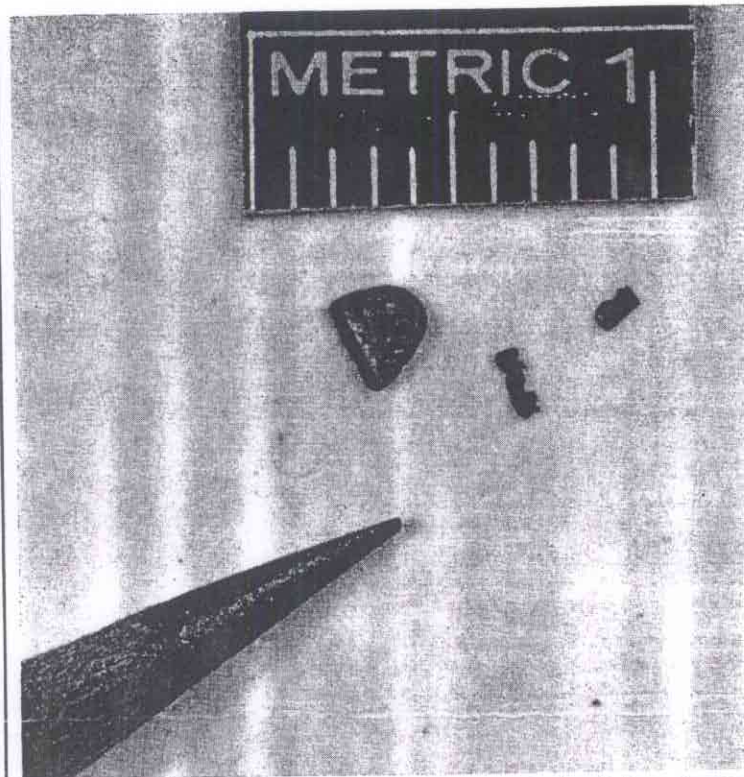


FIGURE 9: (© John Nichols, 1968. A photograph of the (now) three fragments of metal removed from the Governor's wrist, the larger of which weighs $\frac{1}{2}$ grain (32.4 milligrams CE 842.) Compare with pencil point. Photograph by Archivist on July 17, 1968.

ing an arrow drawn to a foreign body overlying the femur. The femur shows no damage. Two more X-ray films, CE 694 and CE 695, were taken of the Governor's left thigh in the A-P projection. A bullet fragment is *not* seen in either of these films; however, examination of the copies in the National Archives clearly shows a partly-erased arrow drawn to a non-metallic fragment lying subcutaneously on the medial aspect of the thigh. Quite clearly, because there was no bullet fragment, in my view, the four surgeons, led by Dr. Shires, were unable to recover any fragment from the bone in their surgical attempt.

Dr. Gregory opines that operating for such a small bullet frag-

assistants operated.

About such wounds Dr. Gregory testified: "No effort, incidentally,



FIGURE 10: (© John Nichols, 1968)



General
Services
Administration

National Archives
and
Records Service

Washington, DC 20408

January 24, 1985

Mr. Edgar F. Tatro
51 Edgemont Road
Braintree, MA 02184

Dear Mr. Tatro:

Thank you for your letter of January 8, 1985, concerning the records of the Warren Commission.

We have the 3 fragments in Commission Exhibit 842 and do not know why they do not appear in the 1967 photograph.

Sincerely,

Marion M. Johnson

MARION M. JOHNSON
Judicial, Fiscal, and Social Branch
Civil Archives Division